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THIS DOCUMENT IS A REPRODUCTION OF THE FIRST TWO CHAPTERS OF "AMERICAN JUNIOR COLLEGES, SEVENTH EDITION." IN CHAPTER 1, "TRENDS IN JUNIOR COLLEGE EDUCATION," THE AUTHORS GIVE ATTENTION TO SIZE, STATE AND NATIONAL PLANNING, ORGANIZATION AND CONTROL, FINANCE, FEDERAL AID, PROGRAMS OF STUDY, ACCREDITATION, STUDENT ACTIVITIES, TEACHERS, AND FACILITIES. "OCCUPATIONAL EDUCATION," THE SECOND CHAPTER, INCLUDES SECTIONS ON (1) PLANNING OCCUPATIONAL EDUCATION, (2) TYPES OF OCCUPATIONAL PROGRAMS, INCLUDING PREPARATION FOR BUSINESS, INDUSTRY, AND HEALTH FIELDS, AND SERVICE OCCUPATIONS, AND (3) PROBLEMS AND REWARDS IN OCCUPATIONAL EDUCATION. THIS DOCUMENT IS ALSO AVAILABLE FROM AMERICAN ASSOCIATION OF JUNIOR COLLEGES, 1315 SIXTEENTH STREET, N.W., WASHINGTON, D.C. 20036. SINGLE COPIES ARE FREE, AND 10 COPIES OR MORE ARE 50 CENTS EACH. (WO)

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AMERICAN ASSOCIATION OF JUNIOR COLLEGES

I. *Past and Present*

No type of collegiate institution figures more importantly in society's goal to educate the many as well as the few than the American junior college. By a variety of means, the junior college is expanding and extending opportunity for education beyond the high school. Availability of at least two years of higher education—as demanded by educational groups, two U.S. presidents, and citizens themselves—is coming closer to reality.

Planners of two-year institutions have come to realize that college may mean many things to many people, that if all those who can benefit from academic study are to be accommodated they must be provided with study and training appropriate to their needs, interests, abilities, and aspirations.

This philosophy has evolved over the little more than half century that the junior college has existed in this country. Some of its early supporters—such men as Henry Tappan, president of the University of Michigan, and William Rainey Harper, the first president of the University of Chicago—saw the role of the junior college as limited to providing the first two years of a baccalaureate program, thus relieving the universities of the responsibility of offering the freshman and sophomore years. Many things have happened, however, to alter the nature and aims of a majority of the country's junior colleges. The population has grown rapidly, and the demand for college opportunity has increased in the face of new social and economic needs. Aspirations of Americans have risen as society has become more complex, and as the advantages of education in terms of employment and advancement on the job have become more evident. While the conventional liberal arts and general education programs leading to transfer are still a vital part of the two-year college endeavor, most of the institutions now also emphasize courses of study that will prepare men and women to fill positions immediately in business and industry, government, social

service, and other areas essential to the development of the nation. The importance of education to the fulfillment of the individual has also been recognized in the changing pattern of junior college education.

This change in philosophy is most dramatically reflected in the public community junior college field, though there have also been changes in the objectives of independent and church-related junior colleges, pioneers in two-year college education. The first junior colleges, established in the late 1800's, were privately supported and operated. By 1900, there were about eight junior colleges—all private—with an enrollment of about 100.

According to historians of the two-year college movement, the oldest publicly supported junior college still in existence was established in 1901 at Joliet, Illinois. Within 30 years, there were 400 junior colleges in existence, and by 1952 there were 597.

Since 1952, the expansion and growth of the junior college idea have been nothing short of startling. More than 200 new institutions have been established since that time, bringing the total by 1967 to well over 800 colleges. Between 1955 and the early 1960's, institutions were established at the rate of about 25 to 30 each year, and the years 1965 and 1966 saw the opening of 50 annually. This rate is expected to continue as communities and states seek to put two years of college within the commuting and financial reach of all the people. (See page 5.)

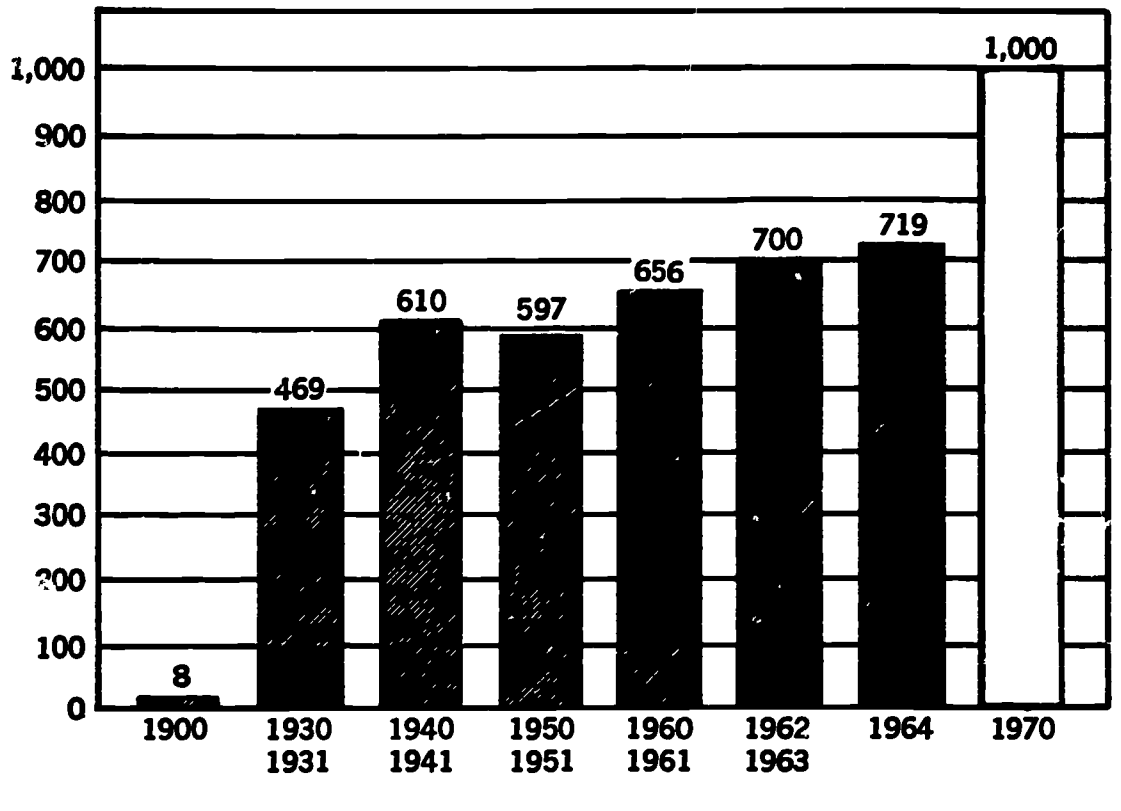
That Americans are taking advantage of the opportunities offered by junior colleges is reflected in the story of enrollments. Total enrollments stand at one and one-half million students in 1967. The numbers have increased by more than 100,000 each year during the recent "explosion" period. Most experts believe that by 1970 America's two-year colleges will be enrolling more than two million students.

More than 10 years ago, James B. Conant wrote that it would not be inconsistent with our ideal of equal educational opportunity if local two-year colleges were to enroll as many as half of the young people who wished to engage in formal studies beyond the high school.[1] In 1967, California junior colleges are enrolling far more than half of all students who begin college; nationally, one in three are beginning in the two-year college.

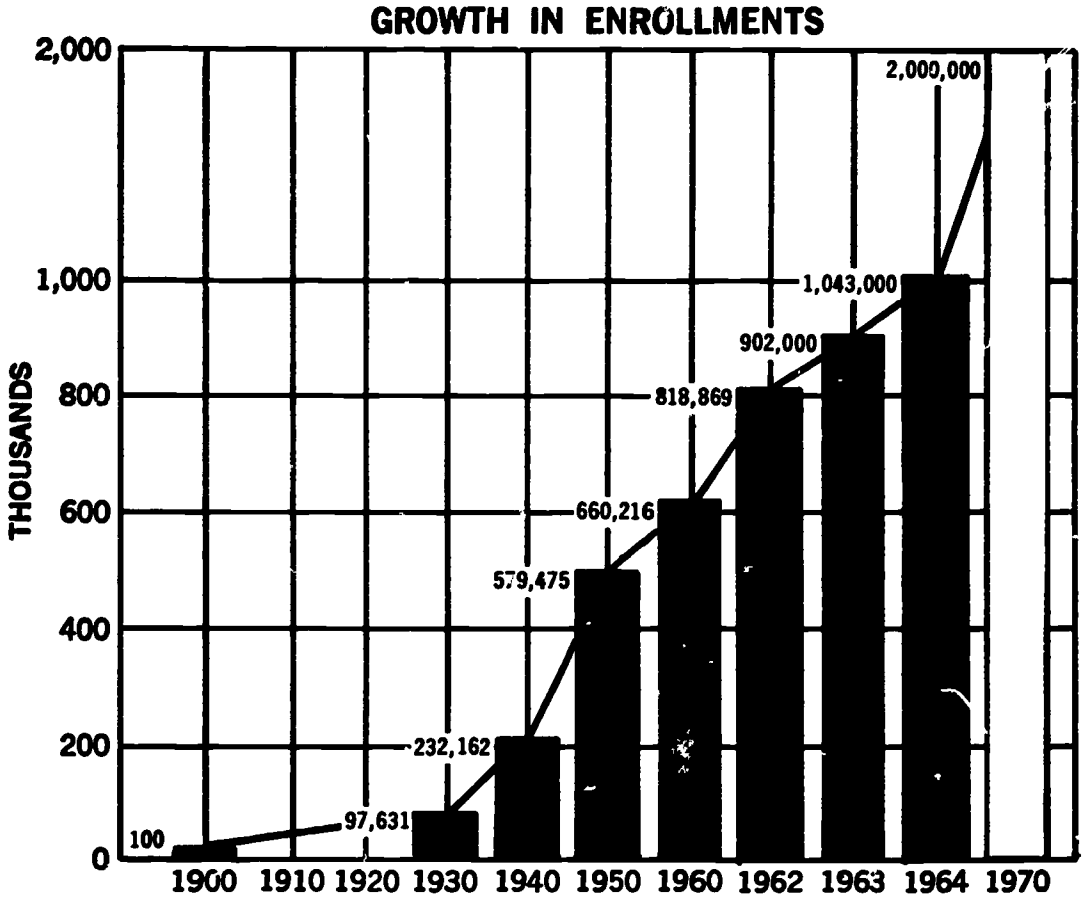
The expansion of the junior college has helped to alleviate the fear-

[1] J. B. Conant, *The Citadel of Learning*, Yale University Press, New Haven, Conn., 1956, p. 70.

GROWTH IN NUMBER OF COLLEGES



GROWTH IN ENROLLMENTS



some crush that at one time threatened to strain the facilities of the country's colleges and universities beyond capacity. Many young men and women who might never have seen the inside of a college classroom now have that opportunity.

In addition to the fact that the two-year college represents perhaps the only avenue to education beyond the high school for many young people, and adults as well, the institution has a number of features that would attract many persons regardless of other educational opportunities that might be available. Teaching, for example, is emphasized in the junior college. Masterful classroom instruction is a major institutional objective. While faculty are not discouraged from engaging in research and other scholarly pursuits, they are expected to put good teaching ahead of other possible activities.

Junior colleges offer a wide range of learning experiences to students who themselves represent a wide range of interests, objectives, and capacities. They are often called great distributing agencies because they offer opportunity for sampling many fields of knowledge and testing abilities with the assistance of counseling and guidance personnel. Some graduates will go on to other colleges and universities for advanced work; some will enter specialized training institutions; many others will move directly into vocations.

TYPES OF JUNIOR COLLEGES

Although junior colleges are frequently categorized as either public or private, there are actually three general categories of junior colleges according to type of sponsorship: church-related, independent, and public institutions. Most of the public colleges are identified as community junior colleges or community colleges.

Church-related Junior Colleges. Historically, religious denominations have figured significantly in the development of all higher education. Church bodies were among pioneers in establishing junior colleges, offering college opportunity in a Christian atmosphere which their founders believed was not available in other types of institutions. Religious denominations continue to figure importantly in junior college education. There are some 170 junior colleges that are affiliated with church groups.

Most of the church-related colleges offer liberal arts and general education programs that lead to transfer to four-year colleges and

universities. But many also offer programs that prepare men and women for work within the churches. There is an increasing trend among many of the church-related colleges, particularly those that are affiliated with denominations that operate hospitals and schools, to offer semiprofessional and technical courses of study in health and other fields.

St. Mary's Junior College in Minneapolis, Minnesota, affiliated with the Roman Catholic Church, offers educational programs in seven health technologies. The programs include:

(1) medical laboratory assistance
(2) medical records technology
(3) medical secretary
(4) nurse-technician
(5) occupational therapy
(6) radiologic technology
(7) food service supervision.

The Roman Catholic Church operates by far the largest number of junior colleges among the various denominations, some 75 institutions. Other church denominations that maintain a sizeable number of colleges include Baptist, Church of Christ, Lutheran, Methodist, and Presbyterian. Approximately 20 denominations are involved in junior college education, most of them with only one or two institutions each. The degree of control varies from denomination to denomination, but the trend seems to be toward less control and involvement in the work of the colleges than in earlier years.

Church-related junior colleges characteristically are small institutions, and they usually maintain residence facilities. They generally attract students from a wide geographic area. Costs for attending the institutions vary widely according to location, but would average about $1,000 yearly.

With the increasing numbers of high school graduates who wish to go to college, some of the denominations are looking with added favor toward the junior college as a means of accommodating these greater numbers. Moreover, there is evidence that some denominations find it more economical, both for the student and the institution, to operate junior colleges than to engage in establishment of four-year colleges and universities.

As a rule, young people choose church-related colleges because they want to continue their education in an atmosphere which emphasizes Christian idealism. This type of college is free to choose its students and faculty in relation to their attitudes toward religious values. In this environment, many students make the transition from adolescence to adulthood, determining in the process spiritual and social objectives. The students establish high goals and learn the disciplined ways essential to achieving these goals. As a result of their college experiences, they are frequently moved to devote themselves to lives of service to society.

Independent Junior Colleges. The independent junior colleges total some 100 institutions, of which about half are coeducational. These institutions are nonprofit but independently supported and usually operate under the control of self-perpetuating boards of trustees. For the most part, their financial support comes from tuition, endowments, and the gifts of alumni and friends. The majority are residential colleges, providing housing and attracting students from beyond the local community.

Costs for attending an independent college may run as high as $3,000 per year, though the average is closer to about $2,000 annually. These costs include dormitory expenses as well as tuition and other basic charges. To help the aspiring but financially needy student, many of the independent colleges offer scholarships and other forms of assistance.

Independent two-year colleges have been free to experiment and innovate in the classroom and to shape their offerings to fit each student's specific needs. They have been among the leading institutions in trying new methods of teaching, new ways of counseling, and new ways of contributing to the welfare and growth of each student. While they frequently tend to emphasize general education and liberal arts training, in recent years many of the independent colleges have inaugurated programs to prepare men and women for jobs at the end of two years. In addition, many have created international study programs and other cultural activities to broaden the horizons of their students. Included in this last group are the many private junior colleges that have taken advantage of their locations or special situations to provide unusual, provocative experiences for students. For example: Mount Vernon College, located in Washington, D.C., took advantage

of its unique community resources to inaugurate a summer program in American politics and government.

The credit program brought students from sixteen states to the campus for six weeks. Those enrolled can earn up to six credit hours, with eight courses offered in the study areas of American history, American studies, political science, and foreign relations. Prominent government officials and congressmen serve as supplementary faculty for the program. Students are given an opportunity to see government in action through field trips to various capital city locations.

Christian College, a college for women in Columbia, Missouri, established a French Language House, a language-living experience for student residents. American girls participating in the program live in the French house where they study the culture of France. The same college also pioneered in a Campus Community Program in which a staff of young student personnel assistants, all having completed baccalaureate programs, live in residence halls with the students, thus providing a vital link between the formal academic and counseling program and the dormitory life of the students.

Many private institutions have found that smallness in size can be a virtue for it offers greater opportunity to work closely with individual students and to develop special programs for them. Size imposes some problems, however, in terms of the resources available to a small college. Many of the smaller independent and church-related institutions have compensated for the lack of the resources that might be found in a much larger college by cooperative action. Clusters of colleges exchange teachers and hold symposia and workshops to increase the knowledge of both faculty and students.

For private junior college administrators, the role of this type of institution in American education is a vital and significant one. They feel, and have expressed themselves accordingly, that the private junior college has a teaching commitment, the pursuit of teaching excellence; that these institutions can provide a strong program in liberal education that will furnish the student with an intellectual experience encompassing studies in the humanities, the social sciences, and the natural sciences.

They also feel that there may be an even broader role for this kind of institution. Many, in fact, have demonstrated their interest and willingness to expand programs to meet new needs of society. Some of the

aforementioned programs are examples. In addition, many administrators plan to offer additional services to the communities in which they live—special programs in adult education, college courses for young housewives, cultural events for the public, and assistance and participation in community projects.

The case for private junior colleges is most persuasive when the educational objectives to which they have dedicated their efforts can be shown to have been largely achieved. For example, in claiming to motivate freshmen and sophomores more quickly and effectively than other sectors of higher education, the private junior college is most persuasive when it points to the successful transfer records and employment achievements of its graduates. When claiming top-grade teaching, the private junior college is most persuasive when its faculty members, individually and as a group, demonstrate leadership in new instructional experimentation, devise new and more viable course patterns, and publish the results of useful discoveries and/or methods that increase the effectiveness of the teaching-learning transaction.[2]

Public Junior Colleges. About 85 percent of students enrolled in two-year colleges are those attending the public institutions. These institutions attempt to place higher education within the geographic and financial reach of the many as well as the few. Their tuition costs are low—averaging about $250 annually across the country—and they are located close to the populations they serve.

Moreover, to accommodate all those who can benefit from at least two years of educational experience in a higher institution, the community colleges maintain admissions policies which permit entry of students who may have the potential for success, though perhaps not the scholastic background that would allow entry into some other types of colleges and universities.

These colleges recognize that if they are to broaden opportunity for college experience, programs must relate to the needs, aspirations, abilities, and interests of large numbers of people. Thus, the public junior colleges offer a wide spectrum of courses of study—ranging from those that prepare young people to eventually complete baccalaureate programs to those that provide education and training for positions of a semiprofessional and technical nature.

[2] *The Privately Supported Junior College: A Place and Purpose in Higher Education*, based on a conference of representatives of private junior colleges, American Association of Junior Colleges, Washington, D.C., 1963, p. 57.

Community colleges are oriented to the needs of the areas they serve. Most of them are locally controlled in separate college districts. Some are part of a local public school district. Financial support is provided in a variety of ways: some colleges are supported entirely by direct state appropriations; some receive partial support from state sources; some depend wholly upon income from local tax sources and from student tuitions.

There are nearly 600 community colleges in the nation, enrolling more than one million students. During the past decade, state after state has included the community college in plans for higher education. Institutions of this type are changing the patterns of college-going in many parts of the country. In areas where only a small percentage of high school graduates went on to college, establishing a community college has resulted in dramatically increased college attendance on the part of high school graduates.

II. *State and National Planning*

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Where once there was little emphasis on organization and systematic development of the two-year institutions, particularly in relation to other types of educational systems, today states and local communities consider it important to look at the total education picture instead of each small part in organizing for the tasks that face both education and society.

Thus, many states are engaged in what has come to be called master planning for higher education; that is, they allocate various functions to the myriad institutions that make up the structure for education after high school. Through such planning, the states are able to utilize more effectively resources available for education and thus to expand opportunities for college experience.

STATE PLANNING

The movement toward making public junior colleges a clear-cut part of the structure of public education above the high school level in each of the 50 states is rapidly being completed. A majority of the states now have general enabling legislation for the establishment of junior colleges, which include public two-year collegiate institutions, whether designed as junior colleges, community colleges, technical institutes, or two-year branches of state colleges and universities.

California provides one of the best examples of long-range master planning for higher education that clearly spells out the role of the junior college as well as other institutions. A pioneer in junior college development, the state, through the master plan created by the 1960 Donahoe Higher Education Act, declares that junior colleges are part of the tripartite structure of higher education in which the state colleges and the University of California are the other components.

The success of such planning is clearly reflected in the growth and development of California's public junior college system. There are 79

now operating, enrolling about one-half million students. Two out of every five students in college in that state are in junior colleges.

Florida has established 28 two-year colleges. The state aims to put college opportunity within commuting distance of all its people and now covers about 90 percent of the population. The state has also pioneered in establishing two universities that offer only the upper two years—junior and senior—of a four-year program, plus graduate work. These institutions are especially concerned with accommodating transfer students from the state's junior colleges. The universities are Florida Atlantic at Boca Raton and the University of West Florida at Pensacola.

Though the "upper division university" does not necessarily represent a trend in higher education, the role of this type of institution might be reviewed here in more detail. In this regard, the plans of the new University of West Florida, though still to be completed, are of interest.

The University of West Florida will provide the junior and senior years of a four-year college program, plus graduate studies in a number of fields. Its officers maintain that any student with an associate degree from a junior college will be admitted, that the university itself will not offer any courses of freshman and sophomore standing. Its purpose will be to meet the needs of the flourishing junior colleges in its immediate area, as well as junior colleges in other parts of the state and even from outside the state.

The University has recognized the role of the junior college in providing the first two years of a four-year college education. Its planners feel that by concentrating on upper division work, the university itself can do a more effective job in higher education. Moreover, this pattern suggests to the university planners that they may be able to develop programs at the graduate level to train junior college teachers.

Illinois, the birthplace of the public community junior college, represents another excellent example of recent master planning for higher education. Adopted in 1965, the Master Plan for Higher Education in Illinois provides a prescribed and significant role for comprehensive junior colleges throughout the state. It has created an Illinois Junior College Board which has taken over the functions formerly carried out by the junior college division of the Office of the Superintendent of Public Instruction. The Illinois plan designates the junior college as part of higher education in contrast to its former status as part of the common schools. In addition, it encourages development

of separate junior college boards by allowing the districts with such boards to qualify for increased state aid at the rate of $11.50 per semester hour and by providing state funds for site, site improvements, and construction in the amount of three-fourths of approved project costs up to 1971 and 50 percent of those costs thereafter. It allows students residing in districts without a junior college to attend Illinois public junior colleges and receive tuition assistance from their own local districts. Discussing the plan, Clifford G. Erickson, an Illinois junior college leader, notes:

> The stage is now set for an unprecedented development of junior colleges in the state of Illinois in the years immediately ahead. Whereas presently one college student in five is enrolled in a junior college, it can be confidently expected that in the years ahead a much larger percentage of college-level students will be enrolled in community colleges. Unit and high school district boards will undoubtedly divest themselves of junior colleges and encourage the establishment of separate junior college districts in order that the benefits to be derived from increased state funds for operation and for construction can be made available to local communities.[3]

Thus, Illinois joins more than a score of other states that have in recent years charted orderly systems and patterns of public junior college development.

ORGANIZATION AND CONTROL

Patterns of organization and control of public junior colleges vary somewhat from state to state and even from community to community. Three organizational systems, however, predominate: (1) the junior college district; (2) the junior college operating in a unified school district; (3) state organization and control. In addition, some states operate junior colleges as branches of state colleges and universities.

While each of the public systems represents a somewhat different approach to college expansion, they are alike in terms of aims and purposes and the people they will serve. Three situations illustrate the predominant patterns of organization.

The Unified System. Florida's public junior colleges are organized as parts of the county school systems. The colleges serve the same geo-

[3] Clifford G. Erickson, "Rebirth in Illinois," *Junior Colleges: 20 States.* American Association of Junior Colleges, Washington, D.C., 1966, p. 157.

graphic district as do county schools, and they are controlled by the same boards of education. In some cases, the colleges may serve more than one county but are operated by the counties in which they are located. In such instances, a committee of citizens from the other counties may advise on policy.

The chief school administrators in the counties have final administrative authority over the community colleges, as they do over the schools. Each college, however, has its own president and administrative staff who are in charge of day-to-day operations. Advisory committees from the community also participate in college planning.

Junior college development is coordinated on a statewide basis by the state department of education. The community junior college division of the state department of education is specifically responsible for providing advice and coordination at the state level and recommending standards and criteria for campus development.

District Pattern. Newly established Dallas Junior College provides an excellent example of the junior college district pattern in operation. Here, the district includes the county and city of Dallas, with the college establishing campuses throughout the area in order to serve the entire population.

The college has its own board of trustees elected by the people; its chief administrative officer is the president. Primary funding for capital outlay is provided by the residents of the district through tax support, though the college also receives substantial state aid and is eligible for federal support.

State Organization and Control. Less common than the unified district and the junior college district patterns is that of state control and organization. An example of this type of control is to be found in the commonwealth of Massachusetts.

New public two-year colleges in Massachusetts are organized as regional community colleges. There are 11 such institutions in existence now. They are controlled by the Massachusetts Board of Regional Community Colleges, and their support comes primarily from the state.

Alabama is another example of such an approach to junior college development. The state has established ten new junior colleges, with others planned, to receive full support and direction from the state. Connecticut and Rhode Island also establish community junior colleges with state control.

A number of other states have state junior college boards or departments, but organization and control are maintained at the local level. In a few states, the community junior college idea is given expression through the establishment of two-year branches of four-year colleges and universities. The University of Kentucky, for example, has seven branches designated as community colleges. The administrative head of each college is a dean who is responsible directly to the University through a dean for community colleges.

FINANCING JUNIOR COLLEGES

As in other aspects of junior college development, financing varies from community to community, from state to state, and even from institution to institution. It is important, however, to recognize that there is a growing tendency among states and communities to provide funding that will ensure that two-year colleges operate at maximum efficiency. Such plans help them to provide the variety of programs that will make it possible to accommodate all those who can benefit from at least two years of college experience.

Private Junior Colleges. Church-related and independent junior colleges depend largely on tuitions and other fees, support from constituent bodies (in the case of the church-related colleges), gifts and grants, and alumni. In their development programs, private colleges have the advantage of being able to draw upon a broad base for support. They are not restricted to any particular community, state, or region. However, financing is a major problem for the private colleges as they compete for support in the academic marketplace.

Public Junior Colleges. The most commonly accepted way to finance the operation of local public junior colleges is through state and local public funds. Usually, laws providing for local financial support by the junior college district authorize the college's governing board to levy a tax on the property in the district. Colleges operating as a part of a unified school or county school district share in the funds raised through taxes by the county or school district. When tuition is charged, it accounts for a small percentage of operating income.

A majority of the states with statutes related to junior college establishment provide some financial aid for college operations. Frequently, state aid is determined by means of a formula, generally based on a unit of student attendance. Some states provide funds through the simple procedure of lump-sum appropriations.

In addition to operating costs, support is required by junior colleges to provide adequate buildings and equipment. While there has been a tendency in the past for colleges to depend almost entirely on local tax monies for capital construction, states are becoming increasingly interested in providing assistance for campus development. Many states now provide state tax funds for capital facilities of junior colleges. Among these, Florida is especially notable in that it provides for the total cost of building county community junior colleges.

FEDERAL AID TO JUNIOR COLLEGES

Junior colleges have benefited from the education-minded administrations and congresses of recent years, recognition that was considered long overdue by many. The first major federal attention given to two-year colleges was in 1963 with the passage of the Higher Education Facilities Act. Title I of the Act provided for grants for construction of undergraduate academic facilities for all institutions of higher education. What was significant for junior colleges was that the Act specified that 22 percent of the construction funds appropriated by Congress should be allotted for the use of public community colleges and technical institutions for construction of facilities.

The proportion of allotments to junior colleges was increased in 1966 through amendments to the 1963 law which continue the facilities program for five years. Under the amendments, the junior college allotment was raised to 23 percent in 1968, and to 24 percent in 1969. Therefore, through action of the 89th Congress in late 1966, nearly $500 million was authorized for public junior colleges for the years 1967, 1968, and 1969.

A loan provision of the Higher Education Facilities Act allows public community colleges and technical institutes to apply for loans to help finance academic facilities.

The sources for federal aid to institutions that offer education beyond high school but do not grant baccalaureate degrees are often hidden in statutes, the primary concern of which is to provide assistance for other types of institutions. Thus, in discussing aid to junior colleges, it is necessary to report on types of assistance rather than on statutes or laws in many instances. The fact that junior college participation in some federal aid programs has not always been clearly spelled out has led to some difficulty for colleges interested in taking advantage of opportunities under various programs.

Another major education bill that came from the 89th Congress in late 1966 and that holds promise for two-year colleges is the Allied Health Professions Act, which clearly includes junior colleges. The Act provides $500 per student to colleges for the operating costs of health technology programs in which the students are enrolled. It also provides funds for construction of health education facilities and other benefits. Since education and training needs in the health fields are among the most critical in the nation, the Allied Health Act has considerable implications for two-year colleges that have invested heavily in the field.

Also passed in 1963 was the Vocational Education Act. Under this law, funds were made available to technical and vocational schools and vocational divisions of community colleges. Federal grants in all cases were to be matched with state or local funds, with the federal share not to exceed 50 percent.

As with other important national legislation, the Vocational Education Act is administered through the state vocational agencies. The machinery of administration has hindered participation by junior colleges. In some states, little or no funds have gone to two-year institutions.

Another vital aspect of federal aid to education in which all institutions of higher education share is that of student assistance. Junior colleges, for example, have participated from the beginning in Title II of the National Defense Education Act of 1958 which provides for federal grants to colleges to be used for loans to needy students. The Act was amended in late 1965 to provide for participation by schools of nursing as well as any school that "provides not less than one year of training to prepare students for gainful employment in a recognized occupation" and that meets certain other provisions. This amendment posed obvious advantages for two-year colleges.

Students eligible for loans may borrow up to $1,000 a year, but the maximum loan under the 1961 amendment was approximately $484. The loan program is a joint arrangement—with the institution contributing 10 percent and the federal government 90 percent. Participating schools approve student applications for loans, make the loans, and are responsible for collection.

The Higher Education Act of 1965, which contained several titles that allowed participation by junior colleges, includes one provision for Educational Opportunity Grants of from $200 to $800 to make new aid available to needy students from low-income families. To be eligi-

ble a student must be in exceptional financial need and unable, except for the Educational Opportunity Grant, to engage in full-time study. By May 1966, the U.S. Office of Education had approved proposals for grants from over 1,400 institutions of higher education, including an estimated 200 junior colleges and 50 technical schools. The average grant for all institutions was $435, and for technical schools $233. These grants can continue through undergraduate study for a maximum of four years if the financial need continues.

To qualify for participation in the program, colleges and schools must match the federal grants with an equal amount of assistance from other sources such as tuition waivers, scholarships, or loans. Low-income students receiving Educational Opportunity Grants may earn added money through part-time employment, may be employed under the work-study program, or may receive loans or other assistance from their college.

Junior colleges also participate in low-interest insured loans under the Higher Education Act. This assistance program is especially aimed at middle- and upper-income families interested in obtaining long-term, low-interest loans from eligible lending institutions. The provision takes into account the fact that education for young people from such families often places a financial burden on their families, particularly if there are a number of children who want to go to college. In many cases, these students cannot qualify for student employment or a student loan. The program provides that the federal government pay interest during study years on a loan made to a student from a family with an adjusted income of less than $15,000 a year, and half the interest during the loan repayment period, which begins nine months following college graduation. A student from a family with an adjusted income higher than $15,000 a year pays the entire interest on the loan, but he may borrow under the guaranteed loan program at 6 percent simple interest. An undergraduate may borrow as much as $1,000 a year up to $5,000, and a graduate student up to $7,500.

Another loan program, the National Vocational Student Loan Insurance Act of 1965, sets up a program to assist students desiring training for rewarding careers in business and trade and in other nonprofessional job areas requiring specialized or advanced training. It provides for a program of loan insurance and a companion program of direct loans. Under this program, the government may guarantee either state or private nonprofit guaranty agencies at interest rates not to exceed 6 percent on unpaid balances. If funds are not available from

those sources, the federal government may insure loans, and, if students are unable to obtain loans under this program, they may apply directly to the Commissioner of Education. Students may borrow up to $1,000 annually for two academic years, and they may use the money to pay all legitimate expenses to which loan funds may be put, including books, tuition, and fees. The federal government pays interest charges on loans during the period of study, and half of the interest charges during the period of loan repayment.

Other assistance programs recently enacted by Congress that allow for participation by junior colleges include:

- *College Work-Study Program under the Higher Education Act of 1965 (transferred from the Economic Opportunity Act of 1964).* The program is aimed at assisting students from low-income families by providing opportunity for employment while they are in school or college.
- *GI Bill of Rights.* This new program provides sums in varying amounts for eligible veterans to attend colleges or schools of their choice. Under the bill, monthly allowances are paid to eligible veterans who study full or part time. For full-time study, a veteran with no dependents shall be paid $100, one with one dependent $125, and one with two or more dependents $150. (A "full-time college course load" is 14 semester hours or more.) For three-quarter-time study, comparable amounts are $75, $95, and $115. For a half-time program, the amounts are $50, $65, and $75. Eligible veterans are entitled to one month of educational assistance for each month of service, up to a total of 36 calendar months. They may choose the educational institution they wish to attend, and it may be a public or private college or university, a professional or vocational school, or other institution that furnishes education at the secondary school level or above. Certain courses are prohibited (for example, apprentice training, farm training, and avocational or recreational courses).

In addition to provisions of the Higher Education Act of 1965, cited above, junior colleges are eligible with other institutions for support under a number of other titles. These include:

- *Community Services and Continuing Education.* This is a five-year program to aid institutions of higher education in undertaking

programs of community services and expanding continuing education. The program is carried out by a designated state agency.

• *College Library Assistance.* This title authorizes a three-year program of assistance to institutions of higher education to develop library resources, train librarians, and conduct research in library science.

• *Strengthening Developing Institutions.* This program aims at assisting small institutions that are beset with a number of problems such as limited financial support. The title takes two approaches to the problem: (1) provision of a "big brother" system whereby a "developing" institution can work in concert with established colleges and universities to solve its problems and (2) a national teaching fellowship program which will permit graduate students and junior faculty members from established colleges and universities to join the faculties of developing institutions in order to augment their teaching resources. The maximum stipend for fellows is $6,500 per year plus $400 for each dependent. Fellowships may not exceed two academic years. Twenty-two percent of the monies available under the program have been set aside for both public and private junior colleges.

• *Financial Assistance for the Improvement of Instruction.* Funds under this title may be used to acquire instructional materials to improve the teaching of science, mathematics, foreign languages, history, geography, government, education, the arts, English, and other humanities. Federal funds, which are matched by the institutions participating, are used to supply classrooms, libraries, or audio-visual centers with equipment, materials, published materials other than textbooks, and closed-circuit television.

In addition to legislative programs that include support for junior colleges, the two-year institutions are also increasingly being invited to participate in educational programs of various government agencies. The National Science Foundation, for example, seeks participation by junior college faculty in summer institute programs, and NSF makes equipment grants to many colleges.

There is growing interest, however, in looking at the special aims and purposes of the junior colleges in relationship to possible major support programs at the federal level.

III. *Programs, Services, and People*

The men and women who find opportunity for education beyond the high school in the junior colleges represent every social and economic stratum, every age group, and myriad interests, abilities, and aspirations.

Studies have shown that many young people entering public community junior colleges are among the first in their families to take college-level work. Many are sons and daughters of low-income families, taking advantage of low-cost, accessible education that was not available to their parents. Yet, many young people from high or medium-income families may wish for a variety of reasons to attend the local two-year college.

The junior college may serve a "rescue" function for many students by providing opportunity to develop latent skills or by providing appropriate programs for those students whose achievements in high school may not meet the requirements usually considered necessary for entry into college.

Two-year community junior colleges also offer programs to retrain or upgrade men and women in their jobs. Moveover, through evening programs, the colleges offer opportunities for cultural enrichment and avocational activities for adults. In addition, many junior colleges offer short courses, symposia, and other intensive services for professional and vocational groups in their communities. In some communities, the junior college serves as a focal point for meetings, drama, music, and other cultural affairs of community-wide interest.

PROGRAMS OF STUDY

Transfer Programs. Lower division, university-parallel courses in two-year colleges require a high level of intellectual performance. They emphasize abstract thinking and duplicate to a large extent the standards of similar courses in universities.

In recent years, two-year and four-year colleges, as well as those national organizations representing the institutions, have made a coordi-

nated effort to bring about better articulation in regard to the transfer process. Studies at the Center for Higher Education, University of California, Berkeley, indicated that lack of planning for transfer students by junior and senior colleges often retarded progress of the student as he moved from the junior college into and through upper division work. With evidence that increasing numbers of students will be entering college at the junior college level, new attention has been focused on the transfer process with the result that many junior colleges and universities are following recently developed guidelines that will facilitate movement from one institution to another.

Guidelines for Improving Articulation Between Junior and Senior Colleges suggest that a number of important steps, when implemented, will be of tremendous significance to thousands of students entering college during coming years.[4]

In the area of admissions, for example, public four-year colleges and universities subscribing to the guidelines are called upon to adopt an overall C average as the standard for admission from junior college. They will weigh the student's performance in the junior college transfer program as the best single predictor of success in a four-year institution and therefore will count that performance most heavily in the admissions decision.

Under the guidelines, university admissions standards would be stated in such a way that junior college students could know at any time whether they would be eligible to transfer when they completed their lower division program. With scores of new colleges opening, the question of admitting students from colleges without regional accreditation is an important one. Four-year colleges and universities are asked to accept students from these institutions on the same basis as they do students from colleges that are regionally accredited, allowing time for the newer institutions to obtain the necessary recognition.

The satisfactory completion of an associate degree transfer program should guarantee upper division standing for the student who transfers. Normally, no maximum should be placed on the amount of credit which may be transferred from junior colleges.

The *Guidelines* statement also calls for more careful articulation

[4] *Guidelines for Improving Articulation Between Junior and Senior Colleges.* Statement by the Joint Committee on Junior and Senior Colleges of the American Association of Junior Colleges, Association of American Colleges, and American Association of Collegiate Registrars and Admissions Officers. American Council on Education, Washington, D.C., 1966.

between junior colleges on curriculum planning. Transfer students, for example, should be given the option of satisfying graduation requirements that were in effect in senior colleges at the time they enrolled as freshmen, subject to conditions or qualifications which apply to the senior college students.

The goal of equality of opportunity in higher education can most certainly be approached by present efforts to expand and strengthen the public community college. However, it will not be enough merely to offer opportunity in these new institutions. Better means must be found to assist students to take maximum advantage of this increased opportunity. This can be done by improving counseling services at all levels; broadening financial aid programs; improving communication among the various types of colleges, between the colleges and the students and their parents, and with the general public; building an even better bridge with the high school and the university; and creating additional transfer opportunities in the four-year colleges. Above all there is need to develop better voluntary means for solving articulation problems involving both high schools and the various colleges, to complement the formal machinery which is now being created in many states.[5]

Occupational Programs. Occupational programs—also known as vocational-technical courses of study—can be found for virtually the entire range of semiprofessional and technical jobs now extant in business, industry, government, and the service fields. Moreover, new programs are created as new kinds of manpower needs emerge.

Description of these curricula is complicated by the variety of titles given them. Such titles as merchandising, retailing, and distributive education may refer to quite similar programs, while electronic technology may include programs varying greatly in difficulty, content, and applicability. Catalog descriptions of vocational-technical programs usually enable one to identify both the scope and the nature of the programs.

While it is difficult to categorize some of the newer programs that have arisen in recent years, perhaps it is enough to indicate that the largest percentage of the occupational programs would fit into the following categories: agriculture; applied arts; business; engineering and industrial technology; trade and industrial programs; health fields; and apparel, culinary, and homemaking arts. Within each of these categories are found scores of occupational areas.

[5] Dorothy M. Knoell, "Focus on the Transfer Program," *Junior College Journal*, Vol. 35, no. 8, May 1965, p. 9.

For example, business would include the following areas:

accounting
advertising and display
banking
business supervision and management
clerical work
data processing
insurance
real estate sales
receptionist
secretarial science

The health fields offer another example:

dental assistant
dental hygienist
dental secretary
dental technician
medical librarian
medical secretary
medical technician
nursing
optical technician
psychiatric technician
sanitation technician

Evening Programs. Two-year college evening programs include most of the regular day courses and in addition many courses designed especially for employed adults. Some students who enroll in evening programs follow a program which will eventually lead to an associate degree. Many more, however, enroll in courses of study as a means of keeping informed about recent developments in their fields of employment. Still others develop improved personal, social, and civic competence from the wide array of courses from which they may choose.

ACCREDITATION

Junior colleges look—as do other institutions of higher education—to the six regional accrediting agencies for approval of their programs. A majority of the two-year colleges are accredited or are in the process of being accredited by one of these agencies: the New England Association of Colleges and Secondary Schools, the Middle States Association of Colleges and Secondary Schools, the North Central Association of Colleges and Secondary Schools, the Northwest Association of Secondary and Higher Schools, the Southern Association of Colleges and Schools, and the Western Association of Schools and Colleges.

Obviously, these voluntary accrediting agencies, formed by higher education institutions, exert a major influence upon higher education, and thereby upon individual and national welfare. Accreditation means the procedure whereby a junior college or other educational institution is evaluated and is accorded recognition or accreditation if the evaluation is favorable.

Such accreditation is important in terms of the status of the institution, and for the junior college, affects the transferability of credits to some universities. In the case of public junior colleges, however, particularly the many newer institutions, recognition by an authorized state agency may be another means of accreditation, at least within the state where the college is located. For new institutions, the accreditation agencies have provisions that allow them to become candidates. Some specialized programs are accredited by professional agencies.

All accrediting agencies follow much the same general plan in evaluating the quality of an institution's performance. They develop a set of criteria or standards which the individual institutions are expected to meet. They examine curricular offerings; instructional effectiveness; student personnel services; faculty training, experience, and competence; adequacy of the college physical plant; adequacy of the library; and the soundness of the financial structure of the college.

Accreditation furnishes the simplest and the most convenient guide for students, parents, and others to the academic quality of a junior college or other institution of higher education; and, when properly understood, it is one of the best means available for this purpose.

STUDENT PERSONNEL SERVICES

At the core of the junior college program are student personnel services. As the description of people and programs would indicate, there is a necessity for helping students to adjust to college living and to choose the best program for their needs and interests.

This service has often been described as a distributing function. That is, through expert counseling and guidance, students are assisted in choosing programs of study where they stand the best chance of success and which may ultimately provide fulfillment in job and community life.

Student personnel services do not end with assistance in program planning. They involve counseling on economic and health problems, record keeping and study of student characteristics, job placement, and follow-up of the student after he leaves the college campus. According to Max Raines, the student personnel program in the junior college consists of a series of related functions designed to support the instructional program, respond to student needs, and foster institutional development. These functions include:[6]

[6] Max R. Raines, "The Student Personnel Situation," *Junior College Journal*, vol. 36, no. 5, February 1966, pp. 6–8.

1. *Orientation* to college and career opportunities and requirements.
2. *Appraisal* of individual potentialities and limitations.
3. *Consultation* with students about their plans, progress, and problems.
4. *Participation* of students in activities that supplement classroom experiences.
5. *Regulation* to provide an optimal climate for social and academic development.
6. *Services* that facilitate college attendance through a program of financial assistance, and facilitate transition to further education or employment.
7. *Organization* that provides for continuing articulation, evaluation, and improvement of the student personnel program.

Thus, in addition to providing the course work, the instruction, and the environment for college study, the junior colleges attempt to provide expert assistance to help students take full advantage of the resources of the college and of the community.

STUDENT ACTIVITIES

Junior colleges provide ample opportunity for extracurricular activities, including those of a cultural, social, and athletic nature. Many activities at the smaller private colleges may be centered in residence halls.

The public community colleges, which do not usually have dormitories, base activity programs in modern student centers which may also house dining facilities. Offices are provided for student government organizations, which actively campaign for campus programs and improvements.

Most public junior colleges also donate their auditorium facilities to community groups for lectures, stage productions, and meetings. Such cooperation is in keeping with the concept of the junior college as a cultural center.

While athletic programs vary in type across the country, most junior colleges maintain intramural sports programs in such sports as baseball, football, basketball, track, soccer, and swimming. In most parts of the country, junior college teams participate in intercollegiate sports.

Newspapers are published by junior college students, either as a part of English or journalism classwork or as a student activity. For those interested in creative writing, many colleges publish literary journals and magazines. They also produce, largely as student projects,

colorful yearbooks dramatizing the colleges, their programs, and members of the faculty and student body.

TEACHER NEEDS AND CHARACTERISTICS

Good teaching, of course, is the most important contribution that the junior college has to make to its students.

Junior colleges tend to seek men and women for faculty positions who place priority on teaching. While research and publishing is not discouraged, this kind of activity usually takes second place to classroom instruction and extracurricular leadership.

Generally, junior colleges employ teachers who have at least a master's degree. Increasingly, the colleges seek to recruit men and women with special preparation for teaching liberal arts and general education courses. In the occupational fields, however, practical experience in a specialty may be substituted to some extent for advanced degrees.

The National Education Association's latest study on teacher supply and demand for institutions of higher education shows that junior colleges rely heavily on four major sources of supply for personnel entering junior college teaching for the first time. These include high schools, graduate schools, four-year colleges and universities, and business occupations.[7] The fact that many public junior colleges are closely related to school operations is perhaps an indication of why the ranks of high school teachers provide a major source of personnel.

Salaries for junior college teachers have risen steadily in recent years, a factor which has helped to attract well-qualified men and women to the field. The median nine-month salary of 22,166 full-time teachers in 401 public junior colleges during 1965–66 was $8,361, an increase of 6.8 percent over the median of $7,828 in 1963–64. Salaries range from more than $15,000 down to less than $3,000.[8]

With the increase in junior colleges and students served, thousands of new teachers will be needed in the foreseeable future. Moreover, many leaders in higher education are convinced that new sources of supply must be found, that programs of preparation specifically for junior college teaching must be expanded. Already, a number of ma-

[7] *Teacher Supply and Demand in Universities, Colleges, and Junior Colleges, 1963–64 and 1964–65*, Research Report 1965 R-4, National Education Association, Washington, D.C., April 1965, pp. 43–45.

[8] William S. Graybeal, "Salaries in Junior Colleges–1965–66," The NEA Sixth Biennial Salary Survey, *Junior College Journal*, vol. 36, no. 8, May 1966, p. 12.

jor universities have instituted teacher-preparation programs with the junior college in mind, for it is not merely a question of meeting demand in terms of numbers, but one of producing teachers who understand the role of the junior college and accept the challenge of working in institutions with students having a wide variety of interests, abilities, and aspirations. The contribution that junior colleges are making to higher education is directly related to the talent that occupies the classrooms of these institutions.

FACILITIES DEVELOPMENT

All too often in the past, junior colleges, especially community colleges, started and remained in unused high school buildings or other temporary facilities. The lack of buildings and equipment especially designed for college work tended to inhibit the role of these institutions in higher education, often obscured their identity, and hindered proper development.

Today, there is a new look. While many institutions, because of the urgency of educational needs, may start in temporary facilities, they do not stay long in such makeshift campuses. In many places, two and three campuses are being built simultaneously as the colleges seek to put classrooms and the best teaching equipment within reach of the populations they serve.

Facilities being planned and built for new junior colleges, as well as for many older institutions expanding or renovating plants, tend to be modern in design with maximum utility built in. For those that are now being constructed there is tremendous opportunity to include modern teaching equipment at less cost than would be required to remodel an older structure.

The U.S. Office of Education estimated that between 1960 and 1965 community colleges would spend $500 million for new facilities. That was a conservative figure; more than $212 million was made available for California junior colleges alone during that period. From 1965 to 1970, experts estimate that $1.5 billion will be spent on construction.

The new look in junior college facilities development entails the careful planning of campuses to meet the functional, aesthetic, and instructional needs of students and staff. This new look is reflected in the 1966 Design Award Program sponsored by the U.S. Department of Health, Education, and Welfare in collaboration with the American Institute of Architects and the Educational Facilities Laboratories,

Inc. The program contained five categories of awards for facilities design and development.

In the category of "Campus Planning," which covered the design of entire campuses rather than a specific building or facility, three awards were given for the planning of the campuses of Jefferson Davis Junior College, Gulfport-Biloxi, Mississippi; Cuyahoga Community College, Cleveland, Ohio; and the Cañada Campus of the San Mateo Junior College District in California.

Some of the philosophy and vision required in planning junior college campuses is contained in a statement by J. Philip Dalby, Dean of Planning and Development at Cuyahoga Community College. He notes:

> A comprehensive community college offers a wide variety of courses and programs, many of which draw upon technical and scientific subject matter which is dynamic and fluid. Obsolescence within the next two or three decades of the physical plant which houses these programs cannot be afforded. Although the present curriculum has been used as a basis for determining further needs, it is expected that some courses will be recast, others will be dropped, and many new ones added—especially in the technical-occupational areas. Also, we cannot be entirely sure of the number of clock hours per week students in the future will be required to attend class sessions to insure maximum learning. Because of this somewhat fluid situation, it is necessary to plan space for certain programs not presently in existence.[9]

Facilities planning in the future will be characterized, as it is in many places now, by efforts to design buildings and campuses that fit into the surroundings, whether the location be suburban, rural, or urban. There will be skyscraper colleges as well as campuses that fit into rolling hills or into modern suburban residential communities. Most new colleges are designed in the context of the needs of the total community. Theaters, auditoriums, and physical recreation facilities are planned with the community in mind as well as the student and faculty populations of the institutions.

The upsurge in facilities development is not confined to the public sector. Private junior colleges, too, have put creative planning to work in bringing about the establishment of facilities and equipment to meet the needs of students and community. For example, Monticello

[9] *1966 Design Award Program*, U.S. Department of Health, Education, and Welfare, Office of Education, Washington, D.C., 1966 (pages are not numbered).

College in Alton, Illinois has designed and built a theatron, a 1,000-seat theatre for college and community use.

Pine Manor Junior College moved its campus from one location to another after new facilities were designed with the students of this small college in mind. The college moved from Wellesley, Massachusetts to a campus in Chestnut Hill, seven and one-half miles closer to the center of Boston. The new campus was organized in terms of residential villages with quiet courtyards surrounded by two-story brick buildings. The traditions of the college were preserved in the resulting architecture.

In Florida, most of the recently established public junior colleges have new campuses. Others are building. The same can be said about such states as California, New York, and Michigan. In fact, in most areas where there has been considerable junior college development, facilities planning is high on the list of priorities.

Corning Community College, located in the hills of western New York, provides an illustration of the way a community college builds for the future. Because of the pressures and needs for college opportunity in the Corning area, the institution opened in temporary facilities. Meanwhile, planners designed a new campus from the ground up. The architecture is modern and the low-slung buildings contain the latest teaching equipment and laboratory facilities. None of the five major buildings is more than a five-minute walk apart. The commons building in the center of the campus provides a student office and study and lounge areas—both important to a campus where most students are commuters.

Many of the new junior colleges have had an opportunity to experiment with the latest audio-visual and programmed learning devices. Data processing equipment has become almost standard in the larger junior colleges and serves as a device for teaching, as a means of processing important college data, and as an important way of training students in the methods and techniques of operating the equipment. In many areas, the computer college has become a reality.

IV. *Trends and Projections*

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Not only will there be many more community and junior colleges in the years ahead, but these institutions will be broader in their services than at present. If the rest of the nation provides junior college services on the scale now achieved by states like California and Florida, there will be more than 850 public community colleges by 1970 as compared with just over 500 in 1965. These institutions will enroll approximately two million students.

For example, there will be rapid expansion of the concept that the community college is an educational resources center for the adult citizenry of the community. Provisions will be made for ready access to the college, and the notion that a student will enroll for a two-year program which he will complete in two years and then sever contact with the institution will change markedly. Instead, students who have completed their high school work and others who can give evidence that they can benefit by a program of the college will avail themselves of the services of the institution many times and in many ways. The community college may well become the center for continuing education in its area. Elementary and secondary educational programs, which have in the past been the dominant offerings at the community level, will be joined by educational opportunities and services designed to meet the needs and interests of the adult community throughout their lives. Obviously, the society of this next generation will develop institutions of this kind just as a previous generation built secondary schools to match the educational requirements of that day.

Less than ten years from now, most citizens of most of the cities in this country will have some contact with their local community colleges. Most states will have put a junior college within commuting distance of a majority of their citizens. In fact, in many communities, the college will be a focal point for citizen interests and activities.

In urban centers the trend toward establishing multicampus colleges is likely to continue in order that educational avenues in the large cities are kept open and accessible. Some of the nation's largest cities—Los Angeles, Chicago, Miami, New York, and Dallas—are already setting the pattern for this kind of development. The multicampus college is one in which the institution establishes branches throughout a metropolitan area in order to put educational opportunity within commuting reach of the entire population.

The cluster college concept, particularly among independent and church-related colleges, is also likely to develop more fully during coming years. Already colleges in the Midwest and in New England have banded together for the sharing of facilities, faculties, and ideas for certain types of programs.

Clearly, a remarkable and inviting future is ahead for those who prepare professionally to have a part in the most noteworthy educational development of this century. Expertise of the highest order will be required upon the part of the faculties, the administrators, and the board members of this new kind of college to assure that it will fashion its own way in response to identified societal needs and that it will do so with purpose and judgment. Cooperative arrangements are called for between these colleges and other colleges and universities, the elementary and secondary schools, as well as the agencies and organizations of the community.

The junior college should also play a key role in this country's efforts in the field of international education. Studies have indicated that the junior college idea may be adaptable to situations in other countries, particularly in developing nations where there is an increased demand for education. In addition, there will be increased exchange of students and teachers between junior colleges in this country and institutions of higher education in other countries.

The junior college is only beginning to realize its potential for advancing opportunity for higher education. It is clear that its role will continue to grow, and that society will benefit from the expansion that lies ahead.

As has already been indicated, junior colleges of the future will be characterized by well-designed campuses, advanced teaching equipment, and other facilities that in and of themselves contribute to the learning process and atmosphere. The places of learning will be

designed to effect better learning. Colleges of the future will be more than just "stopping off" places. They will be integral to the daily living of the people whom they serve.

Curricula of junior colleges will be characterized by change. Present courses of study will be altered and revised to meet new manpower requirements of business, industry, and the professions. Some programs will disappear to be replaced by others as new levels of job sophistication are achieved in many occupational areas. Program opportunities will expand as science and technology make continued advances in the years ahead. Coupled with the ever-changing programs of the two-year institutions will be continued refinement in student personnel services that will help to ensure success of students.

I. *Planning for Occupational Education*

If a majority of Americans are to have the benefit of educational experience beyond high school, there must be avenues of opportunity distinct from what might be called conventional college preparation. These avenues have already been paved and opened in many community junior colleges across the country. They constitute a growing segment of the programming of two-year colleges. They are called occupational education programs and are designed to prepare men and women for sophisticated technical and semiprofessional jobs in business, industry, the health fields, government, and social service.

The National Advisory Committee on the Junior College has perhaps best expressed the need and the planning required for these programs:

> It should be clearly understood by those responsible for education at all levels that middle-level job education is a legitimate function of higher education, and that the junior college is an appropriate instrument for this purpose. Until such understanding is reached, it will be impossible to move forward rapidly and wisely enough in planning for the future.[1]

The Committee goes on to explain that most states and local communities interested in expanding educational opportunities review and study educational patterns in terms of population growth, manpower development, and individual needs and aspirations. Junior colleges have been established in many areas of the country as the result of such conscientious review and study.

Most recently established junior colleges have been planned and organized to include programs of occupational education in their curricula. Furthermore, the colleges are planned in terms of accessibility

[1] *A National Resource for Occupational Education*, statement by the National Advisory Committee on the Junior College, American Association of Junior Colleges, Washington, D.C., 1964, p. 8.

to students, flexible admission policies, appropriate counseling programs, and low cost.

Metropolitan communities have taken special interest in the development of community-centered junior colleges that will meet occupational needs and contribute to resolution of urban social problems. Colleges are now being planned for the inner cities as well as suburbs.

Increased attention is being given by federal authorities, as well as state agencies, to the potentiality of the junior college in attacking the roots of poverty and unemployment. Through several recent federal educational aid programs, junior colleges have found ways to improve and increase retraining and vocational programs.

There has been increased interest on the part of business, industry, and labor in cooperating with community junior colleges in planning programs of education that will adequately meet new manpower needs. Work-study programs have been developed in some places, and at least one major company has designed a scholarship program for occupational manpower in its field.

Increasingly, financial support is being made available from local, state, and federal sources for the equipping of programs for semiprofessional and technical education in junior colleges.

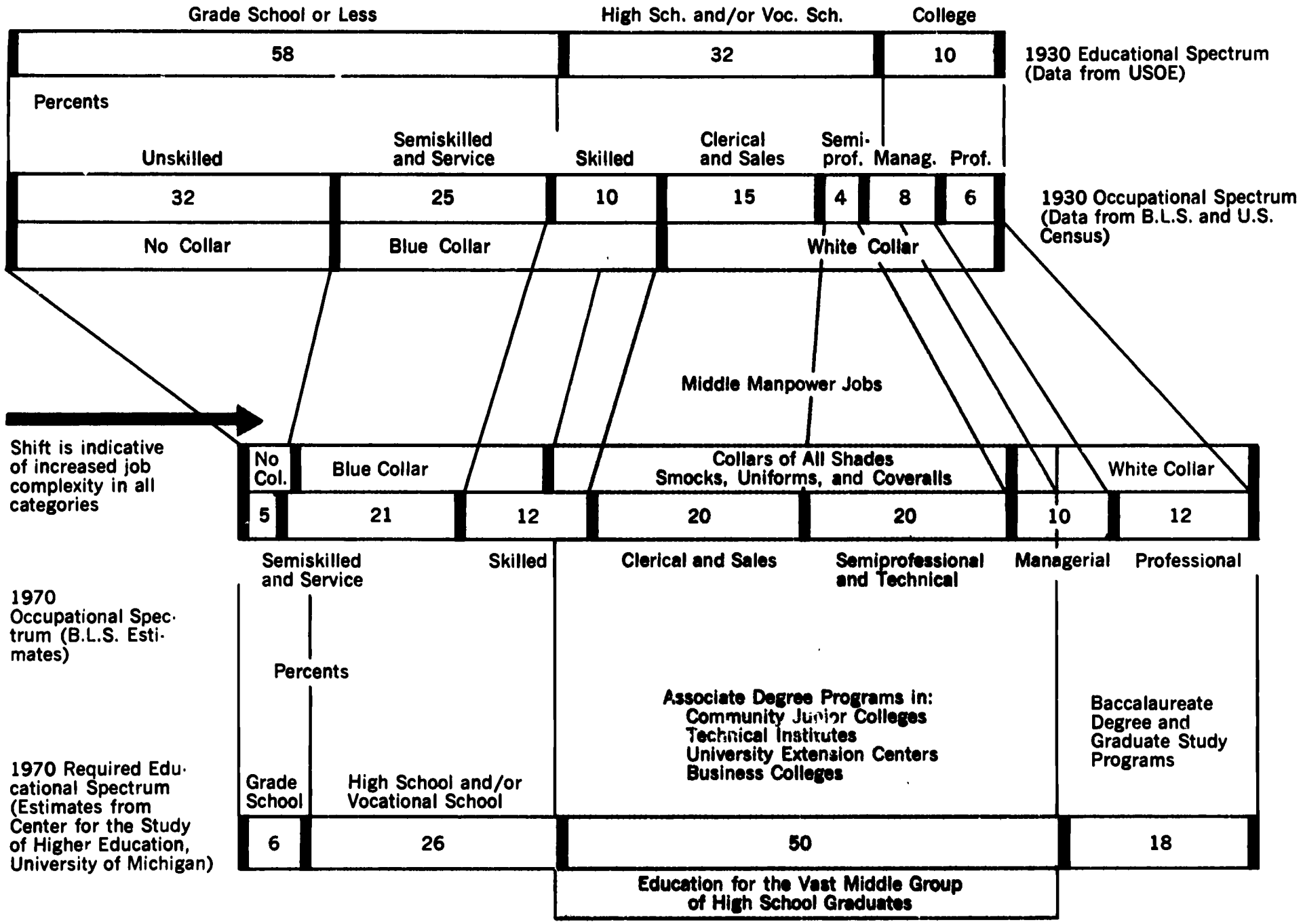
Universities and four-year colleges are planning with junior colleges for the preparation of men and women to teach the new technologies, and for research into problems that may face junior colleges in the future. It is clear now that thousands of teachers will be needed by junior colleges in coming years. It seems evident also that these teachers will require special preparation and attention if they are to take on the responsibility of teaching a heterogeneous junior college population.

Throughout the country, junior colleges are accepting the challenge to establish technical and semiprofessional programs and to expand them commensurate with manpower requirements. Leadership is being provided by the institutions which have the greatest role to play in this national endeavor.[2]

In short, there has been evidence of increasing awareness on the part of society in general of the importance of providing appropriate educational experiences beyond the high school—appropriate to the needs of individuals and to those who will employ them. Yet, the vast potential of the community junior college in the field of technical

[2] *Ibid.*

OCCUPATIONAL TRENDS AND EDUCATIONAL REQUIREMENTS
(U.S. Labor Force—1930 and 1970)



and semiprofessional education is not fully realized. The low prestige value or lack of acceptance of technical education is a major problem. In this country and in many countries abroad, the university with its baccalaureate programs is the desired educational objective of most young people. Occupational programs are chosen often reluctantly as second best options.

Yet, society demands services that can be provided only by a broader spectrum of occupations. To fully comprehend this new kind of education, it is necessary to look at the changing occupational patterns and educational requirements.

The chart on page 37, prepared by Norman C. Harris, professor of technical education at the University of Michigan, dramatically illustrates what is taking place in the world of work.[3] The three-level educational system of the 1930's roughly sorted young people in the various occupational categories shown. But in 1970, as the chart shows, this three-level educational system will no longer suffice. At one extreme, the number of persons with baccalaureate and advanced degrees will increase by 1970. At the other extreme, few jobs will be available for the person with only an eighth grade education. High school and/or vocational school education and training will be necessary for a much larger percentage of the labor force in 1970 than it was in the 1930's. The really significant change, however, is in the middle of the two spectra. Managerial, semiprofessional and technical, clerical and sales, and highly skilled jobs will involve about half of the labor force by 1970. Proper preparation for most of these jobs will require some college training, but usually not the baccalaureate degree. Community junior colleges, technical institutes, and business colleges are the institutions that will educate the middle "fifty percent."

[3] Norman C. Harris, *Technical Education in the Junior College/New Programs for New Jobs*, American Association of Junior Colleges, Washington, D.C., 1964, p. 27.

II. *Types of Occupational Programs*

It is difficult to categorize occupational education programs. New kinds of jobs are emerging constantly as a result of the rapid changes in technology and science, the growth of services, and the expansion of industry into new and untried fields of production.

For purposes of discussion, however, the occupational areas can be divided into three major categories: business-related, industry, engineering-related, and health-related programs. The occupational areas not fitting into these categories will be reviewed separately.

BUSINESS-RELATED PROGRAMS

The language of business has changed. It has become more sophisticated, more complex. Machines are replacing the unskilled clerk and in the process are creating new and more responsible positions in offices, shops, and the many areas where commerce takes place. Entrepreneurs now look for men and women who can assume greater responsibility—responsibility that requires more than high school training. At least two years of college are becoming essential to the young person who wants to get ahead in modern business.

Harris lists the following positions as among those which may now and in the future require a minimum of two years of college experience:[4]

- Bookkeeper
- Business Data Programmer
- Buyer (Retail Store)
- Data Processing Technician
- Department Manager (Retail Store)
- Graphic Arts Technician
- Insurance Salesman
- Legal Secretary
- Library Assistant in a Business Office
- Medical Secretary
- Office Supervisor
- PBX Operator
- Private Secretary
- Real Estate Salesman
- Statistical Technician
- Technical Illustrator

[4] *Ibid.*, p. 44.

Preparation for positions in the business fields, while specialized, does not exclude general education subjects that will help young people to understand the society in which they live. Moreover, such programs include training in communication, both written and oral, vital in an age of communications.

For example, a typical program in general business management would include courses in mathematics, English, composition, speech, physical science, economics, report writing, American civilization, and American government, as well as the usual business courses such as accounting, business correspondence, business organization and management, and sales fundamentals. With certain variations, the same would hold true of programs in business data processing and secretarial work.

As indicated in a catalog of a leading community college, a program in business data processing would include the following:

FRESHMAN YEAR	UNITS FIRST	UNITS SECOND	SOPHOMORE YEAR	UNITS FIRST	UNITS SECOND
Introduction to Business	3		Political Science—American	3	
Business Administration or Accounting	4		Political Science—State and Local Governments	1	
Business Administration		4	Principles of Economics	3	
Data Processing		4	Philosophy-Logic and Scientific Methods		3
Data Processing Equipment		4	Data Processing or Equipment	4	
Systems and Procedures		4	Computer Programming I	4	
English	5	3	Computer Programming II		4
Mathematics	3		Physical Education	½	½
Physical Education	½	½			

This program would lead to an Associate in Arts degree in Business Administration. To suggest further the spectrum of opportunities in business, the college lists the following specialities in this field:

Accounting
Actuarial Science
Administration and Policy
Economics
Banking and Finance
Business Statistics
Foreign Trade

Marketing:
- Retailing
- Wholesaling
- Sales Management
- Industrial Purchasing
- Advertising
- Cooperative Marketing

Government Foreign Service
Industrial Relations and Personnel Management
Public Utilities
Real Estate and Urban Land Economics
Transportation and Traffic Management
Production Management

Many of these courses of study, of course, may offer opportunities for transfer to four-year programs. But they represent a choice—a job at the end of two years or the possibility of advanced study.

In addition to the regular day programs of occupational education in business, many colleges have special evening programs for working men and women. The College of San Mateo in California, for example, has a business management certificate program. The program is designed for persons working at the supervisory level or for those interested in supervisory positions. The certificate is awarded upon completion of four required courses and four elective courses in the business management curriculum. The courses offered are all general in nature and practical in application.

Required courses in the business management certificate program at the College of San Mateo include business management, industrial economics, organization for management, and techniques of supervision. Among elective courses open to these adult students are industrial accounting, introduction to data processing, introduction to statistical methods, merchandising, office management and procedures, sales development, public relations, and statistics.

INDUSTRY, ENGINEERING-RELATED PROGRAMS

With the advance of the scientific and technological age, the manpower needs of industry—and the education required to meet those needs—have changed dramatically. As Harris' chart on page 37 shows, the semiskilled or unskilled person is becoming less and less a factor in the labor market. Instead, research indicates that industry seeks a wide range of technicians usually with education beyond the high school. Harris goes on to say:

> There is a wide range of technical occupations. Many technicians work at highly sophisticated levels in research, design and prototype production. Theoretical knowledge approaching that of the professions, combined with some practical "know-how" about instruments, tools, and laboratory equipment is required for such work. Men and women in these jobs are usually

called "semiprofessional technical," and college level educational programs are required for their preparation.

At the other end of the technical job spectrum are those occupations which demand a high degee of manual skill and ingenuity, but require only a modest background in science, mathematics, and technical theory. Persons who hold these jobs are usually called "highly skilled technicians." While many persons reach this level through on-the-job or armed services training programs, and a few via technical high schools and vocational schools, the main avenue of the future will probably be through junior colleges and technical institutes since college study will be increasingly more important in the future.

It is important to remember that there are many degrees and kinds of technicians between these two extremes. The gap between the professions and the skilled worker cannot be filled by one kind or level of technician—a great variety of talents and specialized abilities are needed.[5]

Harris lists the technical occupations in clusters and maintains that the well-prepared technician should be qualified to move in a number of directions within the various categories.[6]

MECHANICAL TECHNOLOGY

Air Conditioning/Refrigeration Technician	Engineering Aide
Airframe Technician	Hydraulics Technician
Automotive Technician	Machine Drafting Technician
Diesel Technician	Missile Technician
	Operating (Building) Engineer
	Precision Measurements Technician

ELECTRICAL/ELECTRONIC TECHNOLOGY

Aviation Electronics Technician	Microwave Technician
Communications Technician	Missile Electronics Technician
Computer Technician	Radar Technician
Electrical Power Technician	Radio and Television Technician
Electronic Drafting Technician	Sound Systems Technician
Industrial Electronics Technician	Transmitter Technician

CIVIL TECHNOLOGY

Architectural Draftsman	Concrete Technician
Building Construction Technician	Estimator

[5] *Ibid.*, p. 35.
[6] *Ibid.*, p. 42.

Map Draftsman
Sanitation Technician
Specification Writer
Structural Testing Technician
Surveyor (Engineering Aide)

ENGINEERING LABORATORY TECHNICIANS

Ceramics Technician
Chemical Technician
Instrumentation Technician
Metallurgical Technician
Optical Technician
Plastics Technician
Research Technician (many grades)

While the preceding list may provide a starting point for those interested in technical occupations in industry, the changing job picture fluctuates so rapidly that it is impossible to make hard and fast judgments about what should be offered. If the junior college is sensitive to needs of the community upon which it depends for support, it will be looking constantly to the problem of obsolescence as well as new curricular ideas.

When a survey in the district served by Foothill College in California showed that there was a need for electro-photo-optics technicians, the college instituted a course of study for work with ultrahigh-speed photography, lasers, space optics, photogrammetry, and research and development. In providing such a program, Foothill College was demonstrating clearly one of the most important trends in junior and community college development in the United States: response to a new manpower need and opening up a new and intriguing career opportunity for high school graduates.

It is important in considering programs in the occupational fields that most community colleges require general education courses as well as courses in the special study. As with the business-related programs, courses of study in engineering-related fields in today's complex society call for ability to communicate, to understand something about the nature of human behavior, as well as the economics and politics of the country. Lorain Community College in Ohio offers this program in civil technology:

FIRST YEAR	CREDITS
Civil Engineering Technology	17
Engineering Graphics Technology	2
English	6
Mathematics	10
Physics	4

SECOND YEAR	CREDITS
Chemistry	11
Economics	12
Mechanical Engineering Technology	4
Psychology	2

At Lorain, the degree of Associate in Applied Science is awarded to those who successfully complete programs in the scientific or engineering-related curricula. The degree has recognition among the employers of graduates of these programs. In reviewing the occupational education offerings of a college like Lorain, it might be well to look at the organization of the institution itself as described in the college's annual catalog:

The Lorain County Community College is divided into three major academic divisions—the University Parallel Transfer Division, the Semiprofessional/Technical Division (occupational), and the Special Studies Division.

The University Parallel Transfer Division of the Lorain County Community College offers the first two years of a four-year college curriculum and awards the degree Associate in Arts to those who complete it successfully. In consultation with college counselors throughout his two years in Lorain County Community College, the student is guided through a program which he selects and which insures his transferability as a third-year student to the college of his choice.

The Semiprofessional/Technical Division (occupational) of the Lorain County Community College offers curricula for the preparation of engineering technicians in the following fields: chemical, civil, electrical, graphics, industrial, and mechanical. For preparation in the field of business the following curricula are offered: accounting, data processing, general business administration, mid-management retailing, and secretarial science. For preparation in the field of health careers, three programs will be offered, including dental assisting, medical assisting, and nursing. A student who completes one of these curricula successfully receives either the degree Associate in Applied Science or Associate in Applied Business.

The Special Studies Division of the college includes in its programs refresher and improvement courses in English, mathematics, and chemistry, as well as courses directed toward development of reading and study skills. In cooperation with representatives from industry, commercial establishments, and public agencies, the Special Studies Division also creates courses to meet the specialized personal and vocational needs and interests of employees in these establishments, as well as the general public. A number of the programs in the Special Studies Division are offered on a workshop, short course, or seminar basis.

OCCUPATIONAL EDUCATION

In all three divisions of Lorain County Community College, a student may attend classes days, evenings, or both, as he prefers. The only limitations upon this privilege are those imposed by the official schedule published each semester and summer term.

Since Lorain County Community College is a commuters' college, without dormitory limitations of any kind, any student who satisfies admissions requirements is welcome to enter the college.

Organization at Lorain, a relatively new institution, would parallel that of many other community colleges. It plainly shows the conviction of the modern community college that education beyond high school must be appropriate to the needs and interests of all who enter the institution.

PARAMEDICAL AND HEALTH-RELATED PROGRAMS

The third major occupational field is related to health. Kenneth G. Skaggs, occupational education specialist with the American Association of Junior Colleges, cites some of the reasons for increasing concern about preparing young men and women for supporting roles in the health fields:

Tremendous strides are being made in medical and health research. The work of the medical student in our colleges of medicine is far different today from that in the past. In years gone by, there were practicing physicians who actually had but little schooling, and medical students frequently went directly from high school graduation to medical school. Few nurses received anything like the normal amount of training expected now, and most of the people on duty in hospitals received their training through experience. The midwife and the home nurse were important and busy people in any community. Paramedical personnel were unknown as we would identify them today.

Even the diseases and accidents of people have changed during the decades just past, thus focusing the medical and health concerns in new directions and bringing about vast changes in the education of physicians, surgeons, nurses, and paramedical personnel. Tuberculosis, pneumonia, and diabetes are no longer the killers they were at one time. Accidents were of the farm variety for the most part. Today, illnesses have increasingly resulted from the pressures and tensions of the environments that have been created, and accidents from the speeds generated by a new age of machine and transportation. Too, better diagnosis, better knowledge as the result

of research has identified illnesses and organic conditions long hidden to the medical man. All of these changes and new directions have had an impact and an influence upon educational programs, and the kind of people now needed to care for the health needs of society. Preventive medicine is being talked about more and more, but to be successfully explored, the field of preventive medicine requires increasing paramedical support.[7]

In short, Skaggs and other experts agree that the lone practitioner of medicine today is an anachronism, as is his counterpart in other professions. The knowledge explosion has overwhelmed the professional and escalated his responsibilities.

Technicians and assistants support the medical professional in his work. In medicine and dentistry, the list of supporting jobs is long. Some of the names are well known—such as medical laboratory technicians and dental hygienists.

Robert E. Kinsinger, director of public affairs and education for the W. K. Kellogg Foundation, maintains that names for some fast developing technical and semiprofessional occupations in the health fields are lacking.[8] These occupations not only assist the physician and the dentist, but, in an expanding field of knowledge and service, a need exists for technical assistance for the professional nurse, the physical and occupational therapist, the medical records librarian, the dietitian, and many others.

While the great bulk of workers are needed in hospitals and nursing homes, the demand increases for skilled personnel in public health departments, social welfare agencies, private medical and dental offices, and even in industry. As Kinsinger explains, the need in terms of numbers is disconcerting. Complicating the matter further, however, are elusive facts in relation to the kinds of services these technicians will be called upon to perform and the educational background they will require.[9] In 1960, a committee of the American Medical Association identified over 50 allied medical occupations. That number, of course, is growing in a health-conscious society which now receives increased medical care through federal health programs.

[7] Kenneth G. Skaggs, Address before the American Hospital Association, Annual Convention, Chicago, Ill., August 29, 1966.

[8] Robert E. Kinsinger, *Education for Health Technicians—An Overview*, American Association of Junior Colleges, Washington, D.C., 1965, p. 11.

[9] *Ibid.*

A few of the key occupations identified by Norman Harris include:[10]

Dental Assistant
Dental Laboratory Technician
Electrocardiograph Technician
Histologic Technician
Medical Laboratory Technician
Medical Office Assistant
Medical Record Technician
Optical Technician
Psychiatric Technician
Radioisotope Technician
Registered Nurse (Associate Degree)
X-ray Technician

Community junior colleges are assuming an increasing share of the obligation to provide the necessary training for these personnel. For the student interested in health fields, the challenge is exciting and the rewards great. Certainly no segment of the world of work offers more opportunity for satisfying and rewarding contributions to society.

SERVICE FIELDS

In addition to the three broad categories of occupational fields, there has emerged a concern for more effective educational preparation for men and women who will make their contributions to society through the service fields. With growing population and urbanization has come an increasing emphasis on services to humanity, whether offered by governments or by private enterprise. The service industry requires people with greater understanding of the complexities of living and working together.

It is estimated that state and local agencies engaged in public service work were employing about 4 million persons in 1966–67, considerably more persons than were employed in wholesale trade or in the manufacture of both electrical and transportation equipment—including the automobile—or in the manufacture of both food products and apparel. Public service work also engaged nearly three times as many persons as did hospitals in the United States.

This statistic has great significance for higher education, experts feel, because of the variety of occupations in public service that

[10] Harris, *op. cit.*, p. 43.

require education beyond high school. The types of occupations for which specialized training at the college level is required include:[11]

Public Management Administrative Aides
Zoning and Subdivision Technicians
Statistical Technicians
Computer Technicians
Building Inspectors
Assessors
Traffic Engineering Aides
Urban Renewal Technicians
Housing Code Enforcement Officers
Surveyors
Community Organization Workers
Photogrammetric Technicians
Welfare and Family Assistance Workers
Recreation Supervisors
Park Operation Technicians
Public Finance Technicians
Public Personnel Technicians
Public Records Technicians
Environmental Health Technicians
Engineering Aides
Draftsmen
Cartographers
Public Housing Managers

Many community junior colleges now offer curricula to prepare men for service with police forces, fire protection bodies, correctional institutions, social work, and education. At least one city requires all its law officers to study for and complete an associate degree program in police science at the local community college. It is likely that in the future young people entering junior colleges will find many new programs of study that will prepare them for rewarding service to the community and to society.

[11] Dennis O'Harrow, "Junior College Training for Public Service," *Selected Papers from the Forty-Sixth Annual Convention*, American Association of Junior Colleges, Washington, D.C., 1966, p. 69–70.

III. *Problems and Rewards in Occupational Education*

PROBLEMS

In occupational education, planners are carving out curricula and programs where none existed before. Many educational experts and agencies representing the specialities to be taught must develop programs necessary to do the job well. The design of curricula with a degree of specialization sufficient to offer a reasonable breadth of opportunities for employment will be a challenge to the educational institutions. The rapid addition, however, of such programs to the community junior colleges suggests that this is a problem that can be and is being solved.

Tied in with the problem of curriculum planning is that of recruiting and preparing men and women for teaching the new specialities. Tremendous numbers will be needed. Special preparation is required. Many who can teach the programs will have to be enticed away from substantial positions in business and industry and in government. Community colleges and other institutions of higher education must find ways to prepare them for the job that lies ahead.

Certainly, one of the most crucial concerns of education planners is that of bringing about better understanding and more interest in regard to the semiprofessional and technical programs on the part of young people and their parents. This poses a recruitment problem for the colleges and blocks alleviation of the growing shortage of manpower for these important occupations.

It is important for students—and their families—to realize that the programs do lead to rewarding positions, that they are essential parts of the spectrum of higher education, that they will achieve growing status and importance in the economy. Moreover, technical and semiprofessional programs broaden employment and educational opportunities rather than restrict them. Completion of an occupational educa-

tion program does not suggest completion of education. The enterprising student may continue his studies while serving on the job, the earlier training establishing the foundation for university study at a later time. And for those who do not choose to continue formal education, the positions available are in themselves fulfilling and challenging.

The occupational education programs of community junior colleges have become successful and vigorous new arms of higher education. At a time when more and more emphasis is being placed on education, these programs are taking their place as important instruments for social and cultural advancement.

REWARDS

Some of the rewards for men and women who move into technical and semiprofessional occupations are obviously of an intangible nature —service to society, contribution to the economic system, assistance to the sick and needy. These are nonetheless vital factors for the person who chooses a career in industry, in the health world, in the business fields, or in the service fields.

More tangible rewards are those involving salaries, advancement, and working conditions. Year-end surveys by the American Association of Junior Colleges have shown that the well-trained technician or semiprofessional worker is in tremendous demand, that those who employ them are actively recruiting on community college campuses. There is also evidence that the two-year college graduate can command good salaries. Working conditions in the modern plant, business, or hospital are generally satisfactory, and are improving with modernization of facilities and equipment.

But perhaps the most important reward may also be the most intangible, individual self-fulfillment. These new programs of education ensure that many more Americans can find places in society through which they can fulfill their own aims and ambitions and at the same time contribute to the good of society as a whole.